Good Morning Chairman Kroshus and Commissioners.

My name is Dave Nehring, and I represent North Dakota Visionkeepers, a non-profit entity that was established in 2018 to assist grassroots organizations such as the Coteau Preservation Alliance, Say No to Burleigh Wind, and others.

You will hear or have heard plenty of expert testimony regarding the siting of this proposed project. I have heard many times from Natural Resources professionals that if a developer was looking to site a project in the worst possible location in North Dakota, that this would be it.

I'll keep my testimony focused on other aspects of the proposed project, such as:

1. NextEra's need analysis.
2. Reliability and availability.
   a. Polar vortex and wind's contribution.
   b. Polar vortex and natural gas.
3. Sprawl of ND Wind farms
4. Saturation point of wind development.

Let's look at the need analysis in the presentation by NextEra – they state that "additional electrical generation is required to keep up with demand within North Dakota due to population expansion and growth associated with oil and gas development, as well as the high demand for heat in winter" – I'll start with the spreadsheet from EIA showing calendar years 2014 through 2017 – I think we can safely assume that a four-year trend will give us the information to support or deny their claim.

In 2014, the total supplied megawatt hours of electrical generation was 38,331,186 of which 18,577,332 was exported out of state.

In 2017, the total supply was 41,344,701, of which 22,095,464 was exported out of state. This chart shows one thing – we have significantly more generation than what is needed in North Dakota.

Now let's address the issues with the recent experiences involving cold weather and the impact to wind and natural gas. The polar vortex was

present in late January, and I've included a couple screenshots showing the MISO Real-time displays during some cold spells.

The first display shows a total production from all sources of 93,131 MW, of which wind produced only 4.4% of the total – this was at 6:50 AM CST, when the temperature in Bismarck was -33.

Number 2 is later the same day, when production was at 83,134, and wind provided 4% of the total – this was at 3:15 PM CST and the Bismarck temp was -19.

The final display is on February 19 at 8:10 AM CST, as you can see, the total production was almost 83,000 MW, and wind provided under 2%.

I've also attached an article that describes the potential issues with natural gas during the cold winter months. Xcel Energy was forced to shut off gas supply to over 150 customers to keep gas flowing to other customers. Their reason was "loss of pressure". Our baseload generation in North Dakota is very important – we cannot afford to negatively impact that portion of our energy portfolio.

As I was conducting research for a piece of legislation recently, I came across an interesting document – it shared the amount of acres per MW in wind farms in a number of states.

I was amazed at the amount of acreage taken up in North Dakota wind projects, compared to other states. As an example, the projects in North Dakota encompassed 160-307 acres per MW.
In Texas, the data averaged approx. 83 acres per MW.
In Illinois, the average was 71 acres per MW.
In Kansas, the average was 93 acres per MW.
In Oklahoma, the average was 78 acres per MW.
I'm wondering what the reason is? The wind energy associations state that we are a "Top-10" wind state – do we really need all of the space between turbines, or is this a "land grab", planning ahead for further expansion.

I'll now share a couple of statements made by a candidate in the most recent election for Public Service Commission.

When I asked her directly what the saturation point was for wind development in the state, she told me "we are there now".
When I asked for clarification, she added that "more wind and solar will cause reliability issues, add to the strain on current transmission capabilities, and likely cost our ratepayers more money".

In closing, I'll say this – there are challenges in adding an uncertain element to our electrical grid – by uncertain, I mean uncertainty in reliability, cost, and the impacts to our natural resources. In this case, however, the impacts to our resources are HUGE – there are certainly better locations to site a project such as this.

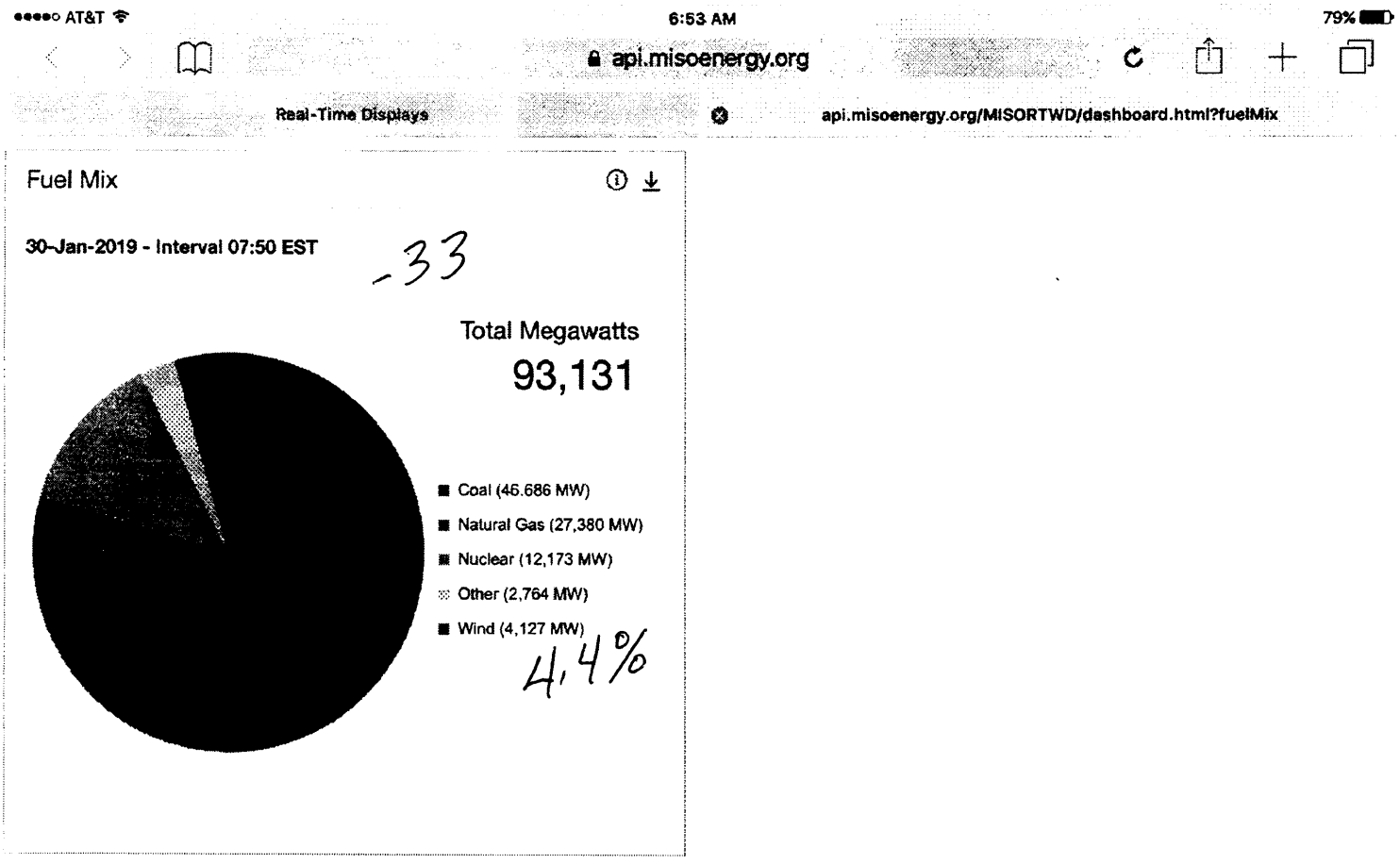
Please deny the application by NextEra.

Table 10. Supply and disposition of electricity, 1990 through 2017

North Dakota

megawatthours

Category	Year 2017	Year 2016	Year 2015	Year 2014
Supply				
Generation				
..Electric utilities	34,636,836	33,415,076	33,105,902	32,088,446
..Independent power producers	6,707,865	4,266,812	3,883,450	4,249,629
..Combined heat and power, electric	0	0	0	0
Electric power sector generation subtotal	**41,344,701**	**37,681,888**	**36,989,352**	**36,338,075**
..Combined heat and power, commercial	34	13	17	109
..Combined heat and power, industrial	160,339	174,551	167,243	124,324
Industrial and commercial generation subtotal	**160,373**	**174,564**	**167,260**	**124,433**
Total net generation	**41,505,074**	**37,856,452**	**37,156,612**	**36,462,508**
Total international imports	**2,159,656**	**2,075,864**	**2,017,638**	**1,868,678**
Net interstate imports	**0**	**0**	**0**	**0**
Total supply	**43,664,730**	**39,932,316**	**39,174,250**	**38,331,186**
Disposition				
Retail sales				
..Full service providers	20,140,426	18,520,188	18,128,948	18,239,732
..Energy-only providers	0	0	0	0
..Facility direct retail sales	.	.	.	.
Total electric industry retail sales	**20,140,426**	**18,520,188**	**18,128,948**	**18,239,732**
Direct use	**174,685**	**191,784**	**183,842**	**170,528**
Total international exports	**24,563**	**9,864**	**35,718**	**157,814**
Estimated losses	**1,095,608**	**966,589**	**904,153**	**964,642**
Unaccounted	**133,984**	**194,565**	**277,383**	**221,138**
Net interstate exports	**22,095,464**	**20,049,326**	**19,644,207**	**18,577,332**
Total disposition	**43,664,730**	**39,932,316**	**39,174,250**	**38,331,186**
Net interstate trade	**22,095,464**	**20,049,326**	**19,644,207**	**18,577,332**



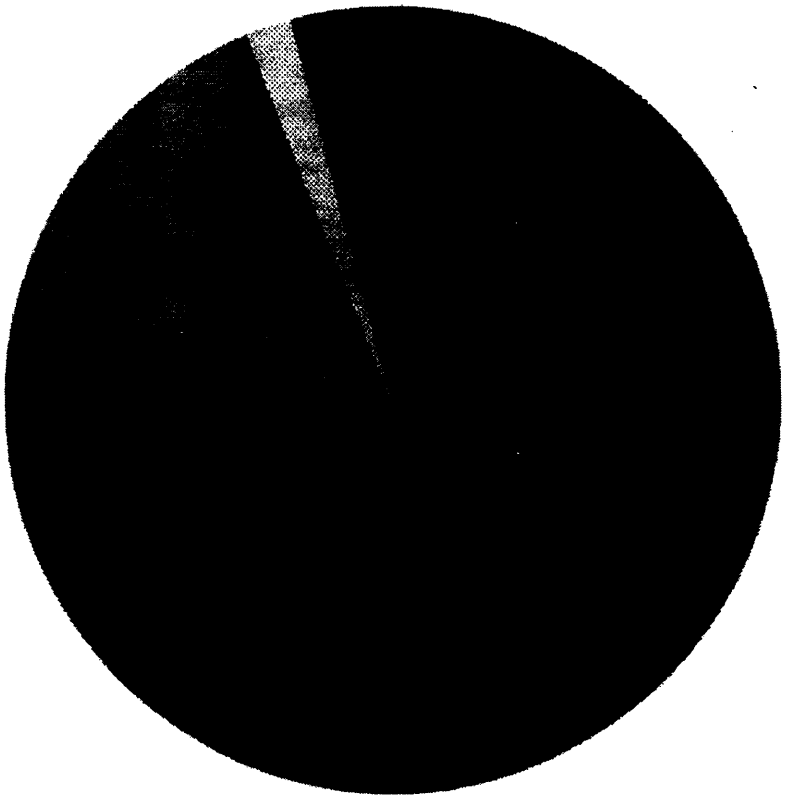
* Data is sourced from the Market User Interface and is considered preliminary and not used for market settlement. Approved LMPs are posted monthly to the Market Reports page.

Fuel Mix

30-Jan-2019 - Interval 16:15 EST

-19

Total Megawatts: 83,134



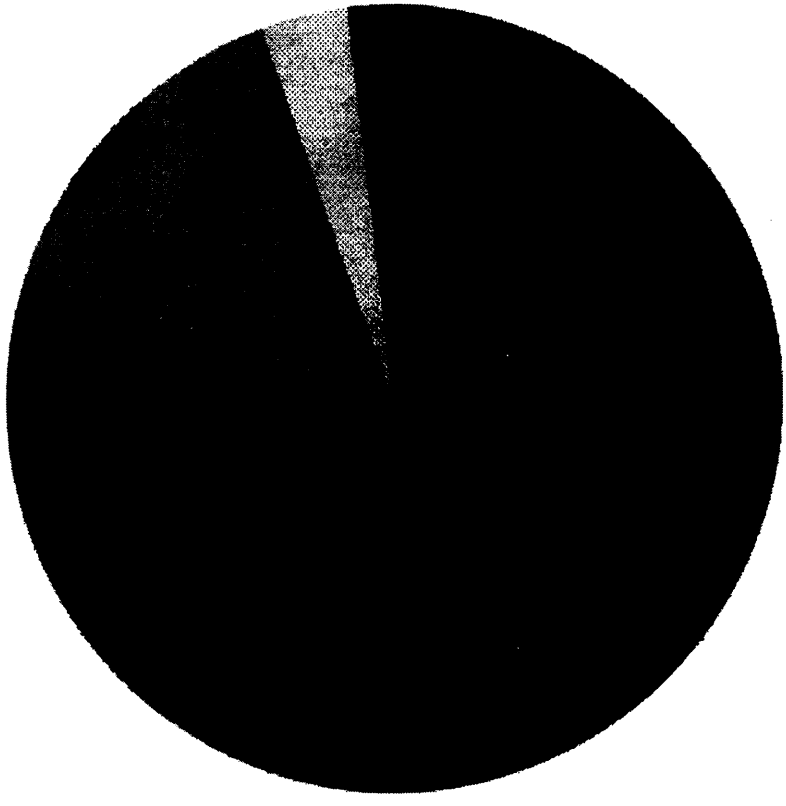
- Coal (40,564 MW)
- Natural Gas (25,838 MW)
- Nuclear (11,781 MW)
- Other (1,584 MW)
- Wind (3,372 MW) 4%

* Data is sourced from the Market User Interface and is considered preliminary and not used for

19-Feb-2019 - Interval 09:10 EST

-22

Total Megawatts: 82,862



■ Coal (42,624 MW) ■ Natural Gas (23,792 MW)

■ Nuclear (11,881 MW) ■ Other (2,996 MW)

■ Wind (1,574 MW) 1.9 %

* Data is sourced from the Market User Interface and is considered preliminary and not used for market settlement. Approved LMPs are posted monthly to the Market Reports page.

PRINCETON, Minn. (FOX 9) - More than 150 customers in Baldwin Township, Minnesota, just outside of Princeton, are without heat after the **extreme weather conditions** caused an "interruption" in their natural gas service.

Xcel Energy said the interruption occurred at 10:30 p.m. Tuesday night. Due to the pressure the weather is placing on the system to heat homes, Xcel Energy said it had to pinch off the gas supply to about 150 customers to keep everyone else in the area online. "We had an area of the system that was constrained," Xcel community relations manager Mark Osendorf said. "We lost pressure. We had to isolate the outage to minimize the impact on a larger number of customers." Gas is not expected to be restored until at least Thursday. Xcel is providing hotel rooms for customers affected by the outage. A command center has been set up at the AmericInn in Princeton and Xcel representatives will be on site to help with accommodations and to provide information about when service will be restored.

The company has booked rooms at the following hotels:

-
- AmericanInn, 910 Run River Road, Princeton (34) 1-763-389-9312
- CountyInn, 18894 Dodge Street Northwest, Elk River (28) 1-763-241-6990
- Super 8, 21130 134th Ave N, Rodgers (25) 1-763-333-0253
- America Best Value, 16776 198th Ave, Big Lake, MN (17) 1-763-262-7666
- Best Western, 89 Chelsea Rd, Monticello, MN (20) 1-763-271-8880
- Run River Motel, 510 19th Ave N, Princeton, MN (11) 1-763-389-3120

The Sherburne County Sheriff's Office said Xcel is also giving out heaters to affected customers, which can be picked up at the command center at the AmericInn in Princeton.

To prevent additional natural gas outages, Xcel is asking all customers in Princeton, as well as Becker, Big Lake, Chisago County, Isanti and Lindstrom to **turn their thermostat to 60 degrees** or lower and reduce their use of natural gas appliances, including hot water, until further notice.

"Any further strain on the system could cause cascading service disruptions throughout the county,"